INPUT®

Parsippany Place Corporate Center, Suite 201, 959 Route 46 East, Parsippany, NJ 07054-3492 (201) 299-6999

F- Proj (P)
YMCD

CONFIDENTIAL

August 30, 1990

Ms. Karen Gedera
McDonnell Douglas System Integration
P.O. Box 516
Mail Code 306-1141
St. Louis, MO 63166

Dear Karen:

Attached is the summary of the findings which I discussed with you, Kerry, Paul, and Jan last week.

Sincerely,

Tom O'Flaherty

Tom O'Flaherty
Vice President

Attachment

Confidential

Summary of ISE Findings

Submitted by Tom O'Flaherty, Vice President, INPUT

Introduction

I met with and was briefed by the following people on Thursday and Friday August 23 and 24: Kerry Wallbridge, Karen Gedera, Jan Digman, Paul Crafts, Steve Theby, Linda Lea Larson, Steve Wallace and Jim Bolen.

McDonnel Douglas staff were very informative, helpful and candid. Within the necessary limits of time available, I believe I received a good picture of past history, recent developments and current plans and options.

A significant portion of my assignment was to put ISE's position in the context of other events going on in the CASE industry (both business and technical). The basis for my observations is my ongoing contact on CASE-related matters with other players in the industry, including IBM, DEC, HP, Unisys, Bull, and TI.

1. The Impact of AD/Cycle

AD/Cycle is emerging as one of the most significant strategic moves by IBM in a very long time (possibly going as far back as the development of the System 360 in the mid-1960s).

IBM has several significant motivations:

- To assist its customers in breaking through the current applications development log jam.
  - This will help get meaningful systems in place faster.
  - Not coincidentally, it should create significantly more demand for IBM hardware. IBM's most important medium-term objective is to increase its hardware sales, especially for its traditional MVS-based systems.

- IBM's objectives, in my opinion, go considerably beyond this, however: IBM needs to create a new IBM-controlled standard that customers will willingly subscribe to (similar to the way in which customers accepted the System 360).

  - Prior standards (e.g., SNA, PC-DOS, SAA, SQL, even System/360) have ceased to provide IBM any real advantage.

  - AD/Cycle meets a real need for a good quality, end-to-end, well-thought-out CASE environment. The need for a standard set of tools (and methodologies) is high in the IBM world because of the 100+ vendors offering a confusing array of incompatible CASE products. Every vendor producing CASE tools for the IBM platform that I have spoken to has seen the need for an AD/Cycle-like product as inevitable.

  - Even the very early and fuzzy announcements of AD/Cycle's future capabilities has met with approval by both users and vendors as being necessary to bring order to the marketplace as soon as possible.

One conclusion is that AD/Cycle will be the only standard used on IBM platforms. In addition:

- The core of AD/Cycle (controlled by IBM) may become the product of choice for IBM-only installations (similar to the way that DB2 has pushed aside previously vibrant independent DBMS products).

- There is also the possibility that AD/Cycle, unless headed off quickly, could become one of the standards on non-IBM platforms as well. (This point is discussed further later).

2. AD/Cycle: Marketplace Impact

The impact on the CASE market has been immediate and profound, especially since most CASE product vendors have targeted the commercial systems market on the IBM MVS platform.

- Vendors offering application development tools have seen their sales plateau since the IBM announcement (at best) or fall.

- The exception that proves the rule is KnowledgeWare which has seen its sales soar:

  - They share the "equity-partner" inner circle of AD/Cycle with Index and Bachman.
  - However, they provide an end-to-end tool (unlike Index, which has benefitted far less from AD/Cycle than expected).
  - Most importantly, KnowledgeWare can make the most credible claim that wherever AD/Cycle goes they will be very close behind (or, as the sales force sometimes implies, IBM may be close behind KnowledgeWare).

Other IBM "partners" (such as McDonnell Douglas) have found that there are very few short or long term benefits from that position:

- Every partner (and some non-partners) makes the same claims for future AD/Cycle compatibility- without yet knowing exactly what this will entail.

- IBM is briefing such a wide audience on AD/Cycle status and plans that the competitive edge from this kind of knowledge is very faint.

- Most importantly, the marketplace has spoken.

INPUT expects that even KnowledgeWare's position will erode as IBM is able to offer its own complete set of tools.

3. McDonnell Douglas Position

McDonnell Douglas has seen its position decline since September 1989 as have other CASE vendors. This is not surprising, given Prokit's positioning and perception as a front-end CASE tool:

- Prokit's comprehensive set of capabilities as a front end tool did not offer any significant protection.

- Even if Prokit's capabilities had already been expanded into a full set of CASE capabilities, this would not have helped, in INPUT's opinion: Texas Instruments, which has offered a repository-based, fully featured CASE tool was not able to develop the CASE market before AD/Cycle and did not benefit from AD/Cycle's announcement.

The most striking finding of my visit is that Prokit does have the capability of becoming an end-to-end CASE tool with equivalent functionality to AD/Cycle:

- Prokit is repository based.

- Arguably, Prokit's repository is more advanced than IBM's; Prokit can certainly be compared to AD/Cycle's functionality.

- The planning of reverse engineering ("reclaiming") capabilities is well underway

- The reclaiming effort could also product a code generation capability.

- The net effect is the capability to produce an effective response in, probably, less time than AD/Cycle and, almost certainly, with far fewer resources.

IBM's approaches to McDonnell Douglas in 1989 supports the position that the technological focus embodied in Prokit has great value.

I also examined STRADIS, the development methodology:

- STRADIS is a very capable product/process for those organizations that have "gotten the religion" of a formal development methodology - however, formal methodologies are not top priorities in many organizations.

- From a market standpoint, AD/Cycle will increasingly contain implicit and explicit methodologies (and related project management tools) which will further narrow the market for independent methodologies such as STRADIS.

My understanding is that STRADIS is loosely tied to Prokit, but that not all the capabilities in each product are supported by the other product.

4. Non-IBM Platform CASE Positions

In INPUT's opinion, no other hardware manufacturer is close to IBM's AD/Cycle in either concept or execution. DEC and HP, for example, are still largely dependent on third parties for CASE tools:

- DEC is forming a repository strategy, but its offering is still primitive. They are only now awakening to the need for ultimately having a tightly coupled CASE environment controlled by themselves.

- HP, on the other hand, has placed a very high value on CASE-like technology for internal use. However, the technology is obsolete. HP's commercial offerings are a series of partnered products, which have to be individually interfaced: The viability of this approach has already been disproved in the IBM market.

- Bull and Unisys are placing much of their reliance on UNIX and OSF sponsored tools (which don't exist yet).

- Many of the other manufacturers are in disarray (e.g., DG, Wang) or do not have the critical mass to focus on longer term issues such as CASE.

OSF is a special case in that its charge is to develop software environments that would make CASE viable.

The other manufacturers generally are only now beginning to wake up to the strategic threat of AD/Cycle: Some years from now customers may focus on software development environment capabilities rather than either software products or pure hardware capabilities.

5. Partnership Potential

As I see it, McDonnell's opportunity has been created by the same force, AD/Cycle, that has had such a negative impact on its immediate business:

- The underlying Prokit technology can be applied to non-IBM platforms.

- Potential partners are awakening to the need for a long term, credible response to AD/Cycle.

- Current technology used by these potential partners is not optimal.

- Prokit is one of the very few products that could advance a partner's efforts significantly.

6. Recommendations

INPUT believes that an aggressive pursuit of a partner would serve McDonnell's interests best:

- HP, OSF, and DEC (probably in that order) represent the best opportunities currently visible. Other candidates may surface in the course of the investigations.

- Keeping (and expanding) Prokit capabilities on the IBM platform would probably make a partnership more attractive (by offering the cross-platform capabilities which non-IBM vendors are forced to accept).

- The rollout of the multiuser capabilities should continue: This is a relatively low cost way of demonstrating Prokit's potential.

- Initial partnership approaches should be at a high level to demonstrate McDonnell's belief in the value of its contribution.

- McDonnel Douglas should try to be as flexible as possible concerning the organizational arrangements in a partnership.

- Most importantly, I view such a partnership as being a real partnership , one that could have continuing benefits for McDonnell Douglas. The business should not be considered as a give-away or divestiture.

INVOICE

INPUT

INPUT FEDERAL ID# 94-2385674

1280 Villa Street Mountain View, CA 94041 (415) 961-3300
Telex 171407 Fax (415) 961-3966

ATTENTION: Accounts Payable

TO

MCDONNELL DOUGLAS CORPORATION
Karen Gedara
Building 301
MC 3061141
St. Louis, MO 63042

(314) 777-6281

DATE 11/09/1990

INVOICE # 110651/2

PROJ. CODE YNMCD

SALES ORDER # 110638

PURCHASE ORDER #

ORDER DESCRIPTION	AMOUNT
Professional fee for custom research "CASE Assessment" 2.5 Days @ $1500 per day	$3750.00
Travel Expenses for Thomas O'Flaherty	
Airfare	722.00
Taxi(s)	50.00
Hotel	296.68
AMOUNT INVOICED	$4818.68

Thank You!

INV 6/88

AUG - 3 1990

(1) Cunningham (2) Tom

MCDONNELL DOUGLAS

McDonnell Douglas Systems Integration Company

July 31, 1990

Mr. Peter A.Cunningham
President
INPUT
1280 Villa Street
Mountain View, CA 94041-1194

Dear Peter:

I very much enjoyed meeting with you last Friday in St. Louis. As usual, your insight into this industry and its direction and opportunities was enlightening.

I am enclosing a complete set of our Information Systems Engineering product and services literature. As we discussed, we have also done considerable research in the area of Legacy System Reclamation, but have not announced any specific offerings at this time.

I look forward to hearing from Tom O'Flaherty, your specialist in the Application Development area.

Sincerely,

Karen

Karen Gedera
Director
Marketing & Business Development

enclosure

325 McDonnell Blvd., Hazelwood, MO 63042

MCDONNELL DOUGLAS CORPORATION
SYSTEMS INTEGRATION COMPANY
MARKETING AND PLANNING
ST. LOUIS, MISSOURI
BUILDING 301, LEVEL 4, MAIL CODE 3061141
AUTOMATIC MACHINE: (314) 234-6753

TO: Tom O'Flaherty

LOCATION (CITY): Parsippany NJ

NUMBER OF PAGES (NOT INCLUDING LEAD): 1

FAX MACHINE NUMBER: 201-263-8341

FROM: Helen Federa
MDSI Marketing and Planning Staff

EXTENSION: ~~36281~~ 36281

SPECIAL INSTRUCTIONS

Look forward to seeing you.

INPUT®

Parsippany Corporate Center, Suite 201 959 Route 46 East Parsippany, NJ 07054-4432 (201) 299-5000

August 10, 1990

Ms. Karen Gadera
Director Marketing & Business Development
McDonnell Douglas
Hazlewood, MO 63042

Via Fax 314-777-1979

Dear Karen:

It was good talking to you this morning. This will summarize what we discussed:

I will visit your operation in St. Louis to review your CASE products and assess their current and likely market position. Two days on-site (planned for Aug 23-24) should be enough time to accomplish the following:

> Review the current product status from both a technical and marketing position
>
> Assess its future market position especially concerning technical and market fit with AD/Cycle

To do this I will need to talk to appropriate people in both product development and marketing areas. We can speak next week in more detail as to what I will need. I have your current product brochures; if there is another level of product documentation, I would appreciate receiving that.

As I told you, I am a generalist consultant who also specializes in a number of areas, one of them being CASE. (Experience sheets attached.)

An item that hasn't made it to the CASE sheet yet is that next week I will be giving a presentation and chairing a panel (including IBM, DEC and Index) on CASE Futures at a FOSPP conference.

I'll be on the road for much of next week, but I'll try to get in touch with you next Tuesday or Wednesday.

My consulting rate is $1,500 per day plus travel expenses. Please sign your acceptance below and return.

Sincerely,

Tom O'Flaherty

Tom O'Flaherty
Vice President

Enclosure

AUTHORIZATION BY: McDonnell Douglas	ACCEPTED BY: INPUT
Steven Gudera	
Name	Name
DIRECTOR	
Title	Title
14 Aug 1990	
Date	Date

FACSIMILE LEAD SHEET

Please check one:

[ ] Destroy Copy

[ ] Call Sender for Pickup

Date 8/17/90

# of Pages: 5 (+ leadsheet) Time 3:00pm

TO: Tom O'Flaherty FROM: KAREN GEDERA

COMPANY: INPUT BLDG: 301 DEPT: ____

CITY: ____ STATE: ____ EXT: ____

BLDG: ____ DEPT: ____

EXT: ____ FAX #: 201-263-8341 SECRETARY: ____

CHECK PHONE: ____

SENT FROM BLDG: 301 FAX #'s: (314) 777-1947/777-1979

Check #: (314) 233-5086/Operator

McDonnell Douglas Corporation

P. O. Box 516, St. Louis, MO 63166

Tom - This is a requirement for us in doing business. Let me know if any problem/questions. Otherwise you can sign while in St. Louis

KAREN

(FAX/1990)

AUG 17 '90 14:09 P01

CONTRACT FOR PURCHASE OF SERVICES

This CONTRACT, entered into by and between McDonnell Douglas Systems Integration Company (Buyer) and INPUT, represented by Tom O'Flaherty, Vice President, (Seller) is for the performance and/or supplying of services as hereinafter set forth.

ARTICLE I - STATEMENT OF WORK

1. Seller shall provide Buyer basic information to be used to review MDSI CASE products and assess their current and likely market position.

2. All work will be performed under Buyer's supervision at MDSI facilities.

3. Non-project related needs for clerical assistance will be provided by Seller.

ARTICLE II - TERM

1. The work defined in Article I shall be initiated on August 23, 1990, and shall be completed by August 24, 1990.

ARTICLE III - COMPENSATION AND PAYMENT FOR SERVICES

1. Seller will be paid $1500.00/day plus travel expenses in support of work identified in Article I and approved by the appropriate Buyer management.

2. Seller will submit an appropriate invoice for work rendered to Buyer at the following address:

McDonnell Douglas Systems Integration Company
325 McDonnell Blvd.
Mail Code 3061141
Hazelwood, MO 63042

ARTICLE IV - RELATIONSHIP OF SELLER TO BUYER

The relationship of Seller to Buyer shall be that of an independent contractor and he shall not be deemed to be an employee, an agent, or a representative of Buyer for any purpose.

ARTICLE V - CONFIDENTIALITY

Seller agrees that the information contained in reports, drawings, documents, or other records which are furnished to Seller by Buyer relative to this contract shall not be disclosed to others nor used for purposes other than performance of this contract without Buyer's prior written consent, however, that this clause shall not apply to information in the public domain nor shall it limit any rights the government may have in such information. Furthermore, Seller will not disclose the nature of this relationship with Buyer to any party without prior written consent of the Buyer. Failure to comply with this provision will cause breach of this contract and relieve Buyer of any liability for payment for any services to Seller.

ARTICLE VI - PATENT RIGHTS AND NONDISCLOSURE

1. All records and work performed under this contract shall become the property of Buyer. Requests by persons or other entities for copies of such records or work shall not be honored without prior written approval of Buyer or as a result of court order or valid subpoena.

ARTICLE VII - HOLD HARMLESS AGREEMENT

Buyer will not be liable for any acts or omissions, negligent or otherwise, of Seller in connection with this contract. Seller will be held responsible for any damage to Buyer's property due to the sole negligence of Seller. Seller will indemnify and hold Buyer harmless from all losses, costs, fees and damages because of injury to Seller occurring in connection with this contract and because of injury to other persons and damage to property arising from Seller's negligent performance hereunder.

ARTICLE VIII - DISPUTES AND APPLICABLE STATE LAW

1. If a dispute between Buyer and Seller arises under this contract, Seller agrees to proceed with the performance of the work hereunder, in accordance with Buyer's instructions pending resolution of the dispute. Upon resolution of the dispute, this contract shall be equitably adjusted (if necessary) to reflect such resolution.

2. This contract will be governed by the laws of the State of Missouri regardless of its place of execution or performance.

ARTICLE IX - GOVERNMENT CONTRACTS

1. If this contract is issued under a Department of Defense prime contract or a National Aeronautics and Space Administration prime contract, certain Armed Services Procurement Regulations (ASPR) and/or National Aeronautics and Space Administration Procurement Regulations (NASAPR) apply hereto. Should those ASPR or NASAPR clauses apply, a list of the applicable clauses will be attached to this contract and will be considered as incorporated herein by reference.

2. Seller agrees that it will not, without MDC's prior written approval, perform any services hereunder that directly involve the federal government or any actual or prospective contract or grant with any branch of the federal government. In addition, INPUT agrees that it will not, without MDC's prior written approval, represent the interest of any component of Buyer before any department, agency, court, court-martial, or any civil, military or naval commission of the United States, the District of Columbia, or any officer employee, or elected official thereof.

   Seller agrees that, unless it has obtained MDC's prior written approval in accordance with this clause, it shall not communicate with any of the above enumerated federal bodies or representatives on MDC's behalf in the performance of this contract, and that it shall refrain from representing its self as a consultant of MDC to or before any such body or representative of the federal government when performing work unrelated to this contract.

   If Seller is performing services on behalf of MDC under another, unrelated contract that permits any of the above prohibited activities, it may perform those functions under that other contract to the extent permitted therein; however, it shall strictly bifurcate and keep separate its activities under the respective contracts with MDC.

3. As a defense contractor, MDC is strictly prohibited by 10 U.S.C. Statutes 2397b and 2397c from providing compensation to certain former employees of the Department of Defense. This prohibition applies to all compensation provided, regardless of form and regardless of whether the services rendered involve the federal government. Therefore, Seller shall not, without Buyer's prior written consent, use directly on MDC's behalf under this contract, the following categories of former federal government employees:

   a. those who, within the two years previous to their use under this contract, were paid civilian employees of the federal government at a rate equal to, or greater than, the minimum rate of pay for a GS-11 under the general schedule, or;

   b. those who, within the two years previous to their use under this contract, were on active duty in the armed forces in a pay grade of 0-4 or higher.

In addition, under certain circumstances, MDC and its agents and consultants are strictly prohibited by the Office of Federal Procurement Policy Act Amendments of 1988 (P.L. 100-679) from offering future employment to certain federal government employees. Therefore, Seller shall not, without MDC's prior written approval, make any offer of future employment to any procurement official of a federal agency in a manner that would result in a violation of P.L. 100-679 under this contract.

Seller shall not use for work performed directly on MDC's behalf under this contract any person convicted within the last five years of a felony related to a U.S. Government contract or subcontract.

4. Acquisition of information -

(a) Limitations - Seller shall not solicit, obtain, use or disclose to MDC directly or indirectly, any information not legally available to Seller and MDC and properly authorized for release to and use by Seller shall determine in good faith whether the release to it of such information is proper.

(b) Records - In the course of Seller's duties, Seller might lawfully and properly receive information the dissemination of which is restricted. This could include (but is not limited to) information that is classified, proprietary, "For Official Use Only", or subject to restrictive legends. Seller shall attach the letter of transmittal or a receipt to any such information it uses on MDC's behalf or delivers to MDC. Such letter or receipt shall identify the information, list its source, the date and means of its transmittal, the recipient, and the discloser's purpose for releasing the information to the Seller.

(5) Assignment - Neither this Agreement nor rights and duties hereunder may be assigned or transferred, by operation of law or otherwise, or delegated by Seller without the prior written consent of MDC.

(6) Code of Ethics for Independent Contractors When Acting on MDC's Behalf

(a) Sellers acting on MDC's behalf shall observe all applicable laws and the standards of business conduct agreed to in the contract.

(b) Conflicts of interests with MDC, its components and subsidiaries, and others proscribed by applicable law will be avoided.

(c) MDC policies regarding gifts, meals, transportation, and entertainment will be observed.

(d) Sellers will act on MDC's behalf consistent with retention or service restrictions imposed by law or MDC.

(e) Information not legally available to the Seller and MDC will not be sought, received, disclosed, nor used on behalf of, or for, MDC.

ARTICLE X - MISCELLANEOUS

Seller is hereby expressly prohibited from disclosing any information to Buyer which is not available to the general public. Failure to comply with this provision will result in termination of this contract.

ARTICLE XI - MAXIMUM EXPENDITURE

The maximum cost of this contract will not exceed $5,000.00 as identified and itemized in Articles I, II, and III of this agreement.

ARTICLE XII - AMENDMENT

Neither this contract nor any term or condition thereof shall be amended or changed in any manner except by an instrument in writing of even or subsequent date hereto, executed by both Seller and Buyer.

ARTICLE XIII - ENTIRE AGREEMENT

This agreement constitutes the entire agreement between the parties relating to the sale of services described herein and supersedes all previous communications, representations, or agreement, either oral or written, with respect to the subject matter hereof. No representations nor statements of any kind made by an representative of Seller or MDC, which are not stated herein, shall be binding on Seller or MDC. No addition to or modification of any provision of the agreement shall be binding upon Seller or MDC unless made in writing and signed by a duly authorized representative of Seller or by an authorized agent of MDC. No course of dealing or usage of trade or course of performance shall be relevant to explain or supplement any term expressed in the agreement.

IN WITNESS WHEREOF, the parties have duly executed this Contract as of the ____ day of _____, 19__

SELLER:	By:	_____
	Typed Name:	_____
	Date:	_____
BUYER:	By:	_____
	Typed Name:	_____
	Title:	_____
	Date:	_____

TRANSACTION REPORT

AUG-17-90 FRI 18:09

DATE	START	SENDER	RX TIME	PAGES	NOTE
[illegible]	18:02	43	6'27"	6	OK